Metabolic Plasticity - 253131
Markers of prenatal metabolic plasticity and their reversibility by postnatal interventions
July 2010 – June 2013

MCAA Greek Chapter
Athens, April 22, 2016
**Main Research Objectives**

General aim is to develop a novel animal model to study prevention and therapeutic interventions in states of compromised metabolism. Specific aims are (a) identification of serum and tissue markers that characterize the metabolic derangements associated with (b) metabolic stress; (c) examination of the effects of medicinal/chemical and lifestyle interventions on these markers and their association with changes in insulin resistance, fat distribution, and metabolic balance.

**Application**

The IOF was very supportive during the application process. They reviewed my skills, setting appointments for at least two occasions. The IOF was able to convey the importance of IOF. Reviewers suggested ways to identify critical information for the application process and its specific requirements and provided relevant references and guidance for follow-up actions.

**Negotiation**

The IOF Post was able to negotiate the research environment by providing me with 4300 Euros per year, which is comparable to the IOF researchers in the Netherlands and Greece. The IOF Post was able to provide the necessary support and the facilities to conduct my research. Communication was effective to ensure regular progress and feedback. The contact person was a number of important issues, and there is a possibility of increased interaction with the scientific community.

**Implementation**

So far, there have been no major implementation problems. However, several issues and enhancements for future engagements will be considered in future discussions with the IOF to help plan the numerous improvements for future IOF engagements.

**Benefits of Participation in this Marie Curie Action**

**Fellow’s View**

In my case, the Marie Curie IOF represents a solid opportunity for the "heterogeneity" of full research potential after a long period of research inactivity. It is undoubtedly an honor which, however, carries a strong competitive outcome, as well as the potential of my commitment to pursue my research goals and were "valid and" by this highly competitive process. In my view, this award substantially changes the investment and the best wishes for Europe for the success of my efforts.

**Host Organisation’s View**

We worked closely with the Scientist in Charge and the Outgoing Host Mentor to plan a set of research training activities that would allow the transfer to the Return Host of important and largely missing technologies. These will also help establishing long-term collaborations with the Outgoing Host and other international and Greek institutions. A goal is the development of a multidisciplinary research group in emerging metabolism in the Return Host (BRNN). The sharing of a competitive, consistent, and attractive research network that will create a permanent bridge research platform sharing common scientific aims, infrastructure, and expertise. It considers such a strategic deal for conducting research in Greece as it will amplify Greek research potential, as well as training opportunities for young Greek scientists within the platform, and will increase the reciprocal efficiency of research funding.
Main Research Objectives

General aim is to develop a model animal system to study preventive and therapeutic interventions in states of compromised metabolism.

Specific aims are:

(a) identification of serum and tissue markers that characterize the metabolic derangements associated with in utero metabolic stress;
(b) examination of the effects of medicinal/hormonal and life-style interventions on these markers and their association with changes in insulin resistance, fuel partitioning, and metabolic balance.
Benefits of Participation in this Marie Curie Action

- **Transfer to the Return Host (BRFAA) of important and largely missing technologies**
- **Establishing long term collaborations with the Outgoing Host and other International and Greek Institutions.**
- **The development of a multidisciplinary research program in energy metabolism in BRFAA**
- **Shaping a competitive transatlantic metabolic research network**
  (permanent vital research platform sharing common scientific aims, infrastructure and expertise which **amplify Greek research potential, as well as, training opportunities for young Greek scientists within the platform**)
A solid opportunity for the “rebirth” of a full research potential after a long period of research inactivity.

An honor with strong functional impact:
  • validating my research goals by a highly competitive process
  • potentiating of my commitment to pursue these goals

This award substantiates the investment and the best wishes of Europe for the success of my efforts.”
Metabolic Plasticity - 253131
Markers of prenatal metabolic plasticity and their reversibility by postnatal interventions

Ranked #14 out of 177 applications submitted to the MC-IOF/Life Sciences competition in 2009 (38 out of 177 awarded)

Arriving in Boston JULY 2010:

- **Day 1:** *We need to change the research plan* (First meeting with the Outgoing Host Mentor)

- **Day 3:** “*There are many plans that we have not been able to pursue because we did not have hands, but now you are here*”… (Outgoing Host Mentor welcoming the newly arrived MC Fellow, a new lab technician, and a summer student-recent M.D. graduate during the first Lab meeting)
Aristides Lytras, MD, Ph.D.
Marie Curie International Outgoing Fellow (MC-IOF-2009)
Biomedical Research Foundation, Academy of Athens, Greece
Joslin Diabetes Center/Harvard Medical School, Boston

Metabolic Plasticity - 253131
Markers of prenatal metabolic plasticity and their reversibility by postnatal interventions
July 2010 – June 2013

REA monitoring event
MIT, Boston, MA
January 23-24, 2012
Developmental plasticity, trajectories and responses to environmental challenges in adult life

Hanson et al 2011 Developmental plasticity and developmental origins of non-communicable disease: theoretical considerations and epigenetic mechanisms. Prog Biophys Mol Biol. 106:272-80
Background

A variety of gestational stressors leading to low birth weight (LBW) establish predisposition to obesity/adiposity & diabetes in animals and humans.

Objectives

1a. To identify alterations in serum & tissue metabolomes, as well as cellular markers of metabolic aberrations in mice exposed to metabolic stress during prenatal life.
1b. To examine aspects of energy/fuel partitioning in animals exposed to metabolic stress during development.
2a. To determine whether interventions which can alter AMPK/mTOR sensor pathway responses can modulate phenotypes associated with intrauterine metabolic stress.
2b. To assess & validate the metabolic serum and muscle/adipose-specific markers identified in the outgoing phase, in a human model of metabolic stress & altered insulin sensitivity.
B. Molecular analysis

The AMPK/mTOR energy/nutrient sensor (e/Ns) system

The mTOR pathway activity has been implicated in the determination of cell/tissue size
B. Molecular analysis

Comparison of phosphorylated components of the AMPK/mTOR sensor system

Hepatic tissue UN vs. C

Statistical trends
Specific hypotheses

1. Serum and tissue metabolomes and components of the **AMPK/mTOR energy/nutrient sensor pathway** are differentially altered under various types of intrauterine stress and may serve as **markers** of metabolic maladaptation.

2. Nutritional, caloric, exercise, medicinal or hormonal **interventions**, during developmentally critical periods in postnatal life can **normalize** these metabolic **markers**.

Ongoing/pending studies during the outgoing phase

1. In vitro assessment of the metabolic impact of liver PP2A-A reduction
2. Insulin/glucose clamp and stable isotope metabolic studies (energy/fuel partitioning)
3. Assessment of AMPK/mTOR pathway components after animal intervention studies
Objectives of the return phase

• Assessment of reversibility of markers of prenatal metabolic plasticity in animal intervention studies, including life-style interventions

Applications & Impact

• Identification of markers of prenatal metabolic plasticity associated with insulin resistance will, in the long-term, facilitate individualized management of patients with compromised carbohydrate metabolism.

• Advancements in the preventive management of diabetes-susceptible patients, in particular with life-style interventions, will considerably alleviate socioeconomic burden.

Long term goal

Multi-disciplinary research program in energy metabolism

• Biomedical Research Foundation, Academy of Athens, GR
• Joslin Diabetes Center, Boston, USA
• Liverpool Obesity Research Network (LORN), UK
• Experimental Physiology, University of Athens, GR
• Bariatric Center, 1st Department of Surgery, University of Athens, GR
• Department of Nutrition and Dietetics, Harokopion University, Athens, GR
• Endocrine & Metabolic Diseases, University of Manitoba, Winnipeg, CAN
Hepatocyte levels of the scaffolding subunit of protein phosphatase 2A control the sensitivity of the AMPK/mTOR sensor system and modify autophagy marker responses to nutrient deprivation.

Aristides Lytras, MD, Ph.D.

Biomedical Research Foundation, Academy of Athens
Joslin Diabetes Center, Harvard Medical School
Metabolic plasticity and energy/nutrient sensing distortion in mice exposed to gestational undernutrition

Aristides Lytras, MD, PhD
Elvira Isganaitis, MD, MPH
Yusuke Adachi, PhD
Michael Chen, BSc
Wen Kong, MD, PhD
Aparna Sharma, MD
Huijuan Ma, MD
Vicencia Sales
Alison Burkart, PhD
George P. Chrousos, MD
Mary Elizabeth Patti, MD

Joslin Diabetes Center/Harvard Medical School
Biomedical Research Foundation, Academy of Athens
Manuscripts submitted or in preparation

Reductions of the scaffolding subunit of protein phosphatase 2A contribute to hepatocyte energy/nutrient sensing distortion in male adult mice following prenatal undernutrition.

Aristides Lytras, Elvira Isganaitis, Yusuke Adachi, Michael Chen, Wen Kong, Aparna Sharma, Huijuan Ma, Vicencia Sales, Alison Burkart, George P. Chrousos, Mary Elizabeth Patti.

(submitted to Endocrinology)

Hormetic associations of energy/nutrient sensing system effectors with birth weight may explain tissue allometric scaling in mice exposed to gestational undernutrition.

Aristides Lytras, Elvira Isganaitis, Yusuke Adachi, Michael Chen, Wen Kong, Aparna Sharma, Huijuan Ma, Vicencia Sales, Alison Burkart, Mary Elizabeth Patti, George P. Chrousos.

(in preparation)
Aristides Lytras, MD, Ph.D.
Marie Curie International Outgoing Fellow (MC-IOF-2009)
Biomedical Research Foundation, Academy of Athens, Greece
Joslin Diabetes Center/Harvard Medical School, Boston

Manuscripts (published)

Developmental programming by maternal insulin resistance: Hyperinsulinemia, glucose intolerance, and dysregulated lipid metabolism in male offspring of insulin-resistant mice.


Diabetes. 63:688-700 (2014)
Aristides Lytras, MD, Ph.D.
Marie Curie International Outgoing Fellow (MC-IOF-2009)
Biomedical Research Foundation, Academy of Athens, Greece
Joslin Diabetes Center/Harvard Medical School, Boston

<table>
<thead>
<tr>
<th>Year</th>
<th>Degree</th>
<th>Institution</th>
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<tbody>
<tr>
<td>2009</td>
<td>Medical Specialty (Endocrinology, Metabolism &amp; Diabetes)</td>
<td>Div. of Endocrinology &amp; Metabolism Hippocrateion General Hospital Athens, Greece</td>
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<tr>
<td>1995</td>
<td>Ph.D. (Molecular biology/ endocrinology)</td>
<td>University of Manitoba Faculty of Medicine Department of Physiology</td>
</tr>
<tr>
<td>1989</td>
<td>M.D.</td>
<td>University of Athens Medical School Athens, Greece</td>
</tr>
<tr>
<td>1983</td>
<td>High School Diploma</td>
<td>Varvakeios Model School Athens, Greece</td>
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</tbody>
</table>
Aristides Lytras, MD, Ph.D.  
Marie Curie International Outgoing Fellow (MC-IOF-2009)  
Biomedical Research Foundation, Academy of Athens, Greece  
Joslin Diabetes Center/Harvard Medical School, Boston

<table>
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<tr>
<th>Year</th>
<th>Type of License or Board Certification</th>
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| 12/2012    | Endocrinology & Diabetes Specialist Register  
General Medical Council, UK (GMC ref. number: 7057044)                                                 |
| 11/2009    | Medical Specialty Board Certification  
(Endocrinology, Metabolism & Diabetes)  
Prefecture of Athens, Greece                                                                 |
| 11/2009    | License to Practice Medicine  
General Medical Council, UK (GMC ref. number: 7057044)                                                 |
| 10/1989    | License to Practice Medicine  
Prefecture of Athens, Greece                                                                 |
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<th>Year</th>
<th>Title</th>
<th>Specialty/Discipline</th>
<th>Institution</th>
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<tr>
<td>7/2012 – 6/2013</td>
<td>Research Fellow</td>
<td>Endocrinology, Metabolism &amp; Diabetes</td>
<td>Endocrinology &amp; Metabolic Diseases, Biomedical Research Foundation, Academy of Athens, Greece</td>
</tr>
<tr>
<td>7/2010 – 6/2012</td>
<td>Research Fellow</td>
<td>Endocrinology, Metabolism &amp; Diabetes</td>
<td>Joslin Diabetes Center, Harvard Medical School, Boston MA</td>
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<tr>
<td>11/2009 – 6/2010</td>
<td>Clinical Research Fellow</td>
<td>Endocrinology, Metabolism &amp; Diabetes</td>
<td>Endocrinology &amp; Metabolism Research Unit, University Hospital Aintree, Liverpool, UK</td>
</tr>
<tr>
<td>4/2006 – 5/2009</td>
<td>Clinical Fellow</td>
<td>Endocrinology, Metabolism &amp; Diabetes</td>
<td>Division of Endocrinology &amp; Metabolism, Hippocratesion General Hospital, Athens, Greece</td>
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<tr>
<td>7/2000 – 9/2001</td>
<td>Resident</td>
<td>Internal Medicine</td>
<td>Division of Internal Medicine, 401 Hellenic Army General Hospital, Athens, Greece</td>
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<tr>
<td>2/1998 – 6/2000</td>
<td>Post Doctoral Research Fellow</td>
<td>Endocrinology, Metabolism &amp; Diabetes</td>
<td>University of Manitoba Faculty of Medicine Departments of Physiology, Medicine, Human Anatomy &amp; Cell Science</td>
</tr>
<tr>
<td>1/1996 – 11/1996</td>
<td>Resident</td>
<td>Internal Medicine</td>
<td>Division of Internal Medicine, 251 Hellenic Air Force General Hospital, Athens, Greece</td>
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<tr>
<td>Year</td>
<td>Name of Award</td>
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<td>8/2012</td>
<td>EMBL Corporate Partnership Registration Fee Fellowship (Registration Fee Waiver) and Travel Grant (for participation to the EMBO/EMBL 2012 Diabetes &amp; Obesity Symposium)</td>
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<td>7/2010 – 7/2013</td>
<td>European Commission - Marie Curie International Outgoing Fellowship for Career Development</td>
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<tr>
<td>11/2009 – 6/2010</td>
<td>Exchange in Endocrinology Expertise (3E) Fellowship of the Endocrinology Section of the Union of European Medical Specialists (UEMS)</td>
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<tr>
<td>6/2000</td>
<td>Manitoba Health Research Council Post Doctoral Fellowship Travel Award</td>
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<tr>
<td>1999 - 2000 (declined)</td>
<td>Health Sciences Centre Foundation Post Doctoral Fellowship (Winnipeg, Manitoba)</td>
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<tr>
<td>1999 - 2000 (declined)</td>
<td>University of Manitoba, Faculty of Medicine, Post Doctoral Fellowship</td>
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<tr>
<td>3/1997 – 2/1998</td>
<td>Research Stipend for “Greek Scientists Visiting From Abroad” awarded by the General Secretariat of Research and Technology (Hellenic Ministry of Development)</td>
<td></td>
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<tr>
<td>6/1994</td>
<td>Merck Frosst Canada Inc. Award for Excellence of Doctoral Research in Cell Biology (University of Manitoba)</td>
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<tr>
<td>6/1994</td>
<td>University of Manitoba, Faculty of Graduate Studies Travel Award</td>
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<tr>
<td>1993 - 1994</td>
<td>Manitoba Health Research Council Postgraduate Studentship</td>
<td></td>
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<tr>
<td>1985-1989</td>
<td>University of Athens, Antonios Papadakis's Undergraduate Scholarship (awarded after interdisciplinary competition, including all University Schools and Faculties, by written examination)</td>
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</table>
OPERATIONAL PROGRAM
“EDUCATION AND LIFELONG LEARNING”

“ARISTEIA” ACTION

“Metabolic Epigenesis”

Title

Metabolic Plasticity and Postnatal Correction of Stress-induced Epigenetic Changes

Submitted: Boston, September 1, 2011
European Research Council

ERC Starting Grants

NOT ELIGIBLE
(TIME LAPSED SINCE MD/Ph.D.)
DECEMBER 2013

ERC Synergy Grants: 13 frontier research projects to get €150 million

Synergy Grant ERC Call

10 October 2012

EUROPEAN COMMISSION
FP7 Specific Programme IDEAS

SEVENTH FRAMEWORK PROGRAMME
Metabolic Plasticity - 253131
Markers of prenatal metabolic plasticity and their reversibility by postnatal interventions

Approaching JUNE 2013 ....

Inquiring prospects at University of Athens & BRFAA:

- University hires “frozen” - Internal Lecturer promotions to the Assistant Professor level accelerated

- 80-85 % reduction in state funding to the Biomedical Research Foundation of the Academy of Athens (BRFAA)

- BRFAA does not intend to invest in Metabolism & Diabetes

- As candidate “may be not as attractive”

- ... at the end “you are an M.D., you have options” ....
JULY 2013:

Initiation of
Endocrinology, Diabetes & Metabolism
Private Practice  ……

……... while always thinking about research…..
ERC Starting Grants 2014

“Applying” as collaborating investigator

Submitted: Athens, 27 March 2014
European Research Council

ERC Starting Grants 2014

Press release

15 December 2014

ERC Starting Grants: 328 early-career top researchers funded with €485 million
CONCLUSIONS

- The MSCA offer wonderful opportunities to researchers
- However, people have their own agendas not the fellow’s
- A Marie Curie Fellow may be simply “hands” in another person’s agenda (understandable… but not pleasant)
- A Marie Curie IOF/IEF may not be as strong as a “passport”, if the general scheme of things is not favourable
- The MSCA need to protect Europe’s investment in the MC fellows (additional tools may be needed to support research activity after the end of MC fellowships?)
Metabolic Plasticity - 253131
Markers of prenatal metabolic plasticity and their reversibility by postnatal interventions

QUESTIONS

➢ What is the significance of being a Marie Curie Fellow Alumni?

Why?

➢ Greece is one of the top nations in Basketball.

Why?
Acknowledgements

Mary Elizabeth Patti
Elvira Isganaitis
Michael Chen
Yusuke Adachi
Wen Kong
Aparna Sharma
Huijuan Ma
Vicencia Sales
Alison Burkart

George P. Chrousos
Katia Karalis

Edward. J. Calabrese
(University of Massachusetts)

Marie Curie - International Outgoing Fellowship (2010 -2013)

MC-IOF-2009-253131: Metabolic Plasticity

“Markers of prenatal metabolic plasticity and their reversibility by postnatal interventions”
EXTRA SLIDES
OVERVIEW OF PROGRESS ON THEORETICAL AND PRACTICAL (HANDS-ON) TRAINING TARGETS DURING THE OUTGOING PHASE

1A. Progress on theoretical training targets for phase O1 (year 1)

Specific training theoretical targets achieved during the first year of the MC-IOF:

*Training activities in ethics, high throughput methodologies, epigenetics, diabetes concepts, biochemistry & intermediary metabolism at Joslin Diabetes Center and Harvard Medical School*

(1) *Ethics training in animal use and care* (mouse and rat), as required by Joslin Diabetes Centre IACUC (3-day online training with multiple modules spreading over the full range of laboratory use of rat and mice, including review of relevant practices (AALAS Learning Library, July 6-8 2010, [http://www.aalaslearninglibrary.org/aboutall.asp?strKeyID=8CC03101-5C5F-4160-9583-829921883392-0&AboutAll=2](http://www.aalaslearninglibrary.org/aboutall.asp?strKeyID=8CC03101-5C5F-4160-9583-829921883392-0&AboutAll=2))

(2) *Training in the principles of RNA microarray analysis* (including use of Gene Set Enrichment analysis (GSEA, Massachusetts Institute of Technology)- registered GSEA user Sept 30, 2010) by multiple one-on-one sessions (August 2010 – August 2011) with J. Schroeder (Joslin Diabetes Ceneter Bioinformatics Core Manager), as well as, attendance of 2 specific short (2h) courses offered by the Harvard Medical School Countway Library (July 20 -27, 2010):

(a) *Introduction to Microarrays and Affymetrix Data analysis using R/Bioconductor* (July 20, 2010)

(3) **Training in metabolomics concepts & methodology principles** through interactions with M.E. Patti (outgoing host mentor) and E. Isganaitis (JDC senior research fellow) and Patti Lab meeting presentations.


(5) **Training in advanced diabetes-focused biochemistry/intermediary metabolism** through exposure to the joint Data Group Seminars (Kahn, Patti, Kulkarni, Tseng) taking place weekly. This has been of fundamental aspect of the fellow’s theoretical progress in energy metabolism as these 4 labs, under the guidance of C. R. Kahn a world leading figure in insulin signalling research are among the ones contributing significant concepts to the field.

(6) The above is complemented by the **Joslin Diabetes Centre weekly seminars** ([http://www.joslinresearch.org/EVENTNET/tues_onlineSchedule.asp](http://www.joslinresearch.org/EVENTNET/tues_onlineSchedule.asp)), (up to 3/week) as well as, by multiple Harvard Medical School Seminars (Brigham and Women's Hospital, Children’s Hospitals, Beth Israel Deaconess Medical Centre and Dana Farber Cancer Institute; [http://www.bidmc.org/CentersandDepartments/Departments/Medicine/Divisions/Endocrinology/EndocrinologyGrandRounds.aspx](http://www.bidmc.org/CentersandDepartments/Departments/Medicine/Divisions/Endocrinology/EndocrinologyGrandRounds.aspx))

(7) Attendance of the **2010 Joslin Research Retreat** (Newport, Rhode Island, November 8-9, 2010). In the annual 2010 Joslin Research Retreat the full range of research performed at Joslin is presented in an intense 2-day seminar, where lab leaders outline the most important results produced in the last year ([https://store.joslin.org/cmeweb/CME_PT_1712.aspx?ActivityId=1712](https://store.joslin.org/cmeweb/CME_PT_1712.aspx?ActivityId=1712)).
Scientific symposia and events at institutions outside Harvard Medical School

(8) Attendance of the 2011 Keystone symposia on “Type 2 Diabetes, Insulin Resistance and Metabolic Dysfunction (J1)”, January 12-17, Keystone, Colorado. The Keystone symposia are very highly regarded and bring together specialists on specific research subjects. Attendance of the 2011 Diabetes symposium allowed the fellow to be exposed to advanced current concepts of metabolic research and identify significant areas of interest for his own research, which influenced the revaluation and positively affected the progress of the project (http://www.keystonesymposia.org/meetings/viewPastMeetings.cfm?MeetingID=1114&CVID=3888373&CFTOKEN=81529473).

(9) Attendance of the “4th Annual Isotope Tracers in Metabolic Research: Principles and Practice of Kinetic Analysis” course, April 17-22, 2011, The Peabody Little Rock, Arkansas (www.mmpec.org/shared/tracers.aspx). During the course, the fellow had the opportunity to present the basic characteristics of the UN-LBW mouse model and to receive specific advice on the analysis and research planning of stable isotope studies (Drs M. Puchowicz, C. Croniger, Case Western MMPC, http://www.case.edu/med/mmpec/index.html).

(10) Attendance of the “The 93rd Annual Meeting of the Endocrine Society”, June 4-7, Boston MA (http://www.endo-society.org/endo/program/). The fellow attended this meeting that took place in Boston with specific focus on endocrine effects on the regulation of energy metabolism. Critical information presented included the impact of the HPA (hypothalamus-pituitary-adrenal)

(12) **EBI Bioinformatics Roadshow Boston Workshops 1 & 2**, November 28-29, HMS - Countway Library - Room 403, Boston, MA, Bert Overduin, Gabriella Rustici EBI [http://www.ebi.ac.uk/Information/events/calendar/viewevent.php?events_data_id=2213](http://www.ebi.ac.uk/Information/events/calendar/viewevent.php?events_data_id=2213)

Description: The European Bioinformatics Institute (EBI) presents a lecture and hands-on workshop introducing its wide range of bioinformatics resources, with a focus on genomics and functional genomics resources. The first day of this workshop will be dedicated to the Ensembl Genome Browser. After covering the basics of browser navigation and genome annotation and the BioMart data retrieval tool, special attention will be given to comparative genomics data (orthologs and paralogs, whole genome alignments, synteny) as well as variation data (small variants, structural variants, variant effect predictor tool). The second day will focus on the functional genomics resources; we will illustrate how to browse, interpret and retrieve data from the ArrayExpress repository of transcriptomics data, the Gene Expression Atlas, which provides information on gene expression patterns within different biological conditions, and Reactome, a curated pathway database.


(14) **BIOBASE ExPlain Analysis System for microarray and proteomic data**, Thursday, December 08, 2011; 13:00 - 16:00, HMS - Countway Library - Lower Level 2, Room 025 [http://www.biobase-international.com/product/explain](http://www.biobase-international.com/product/explain)
Scientific symposia and events at Harvard Medical School


Scientific symposia and events at institutions outside Harvard Medical School

19) WORKSHOP: "Increasing research interaction between basic biomedical and clinician scientists" Winnipeg, November 17, 2011 (Attendance and participation as a member of the expert panel)
http://blog.uwinnipeg.ca/research/2011/06/workshop_increasing_research_i.html
Training activities in complementary skills at Harvard Medical School/MIT

(1) **Joslin Fellow’s Council Series** *(throughout the academic year):*

   a. *“How to write the perfect grant”:* A series of 4 presentations by distinguished PIs at the Joslin Diabetes Center

   b. *“Setting up and running a lab”:* A series of 4 presentations by PIs at the Joslin Diabetes Center

   c. *“Meet the professor” series* following the talk of selected invited speakers (2-4 annually). The speakers answer questions and give their unique perspective and career advice to the fellows in a 60-90 min round table format


(4) **REA Marie Curie Monitoring Event**, January 23-24, 2012, Boston, MA, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA
http://postdoc.hms.harvard.edu/events/featuredevents2012.html

http://postdoc.hms.harvard.edu/PDF/PolishedPostdoc.pdf;  
http://postdoc.hms.harvard.edu/events/featuredevents2012.html  
**Description:** In today's tough job market you have to set yourself apart from other jobseekers to achieve success. Derek Haseltine illustrates the importance of presenting yourself in the best possible light. Discussion topics include: (i) Fine-tuning your CV/resume, (ii) Developing new skills, (iii) Polishing your professional image, (iv) Taking advantage of career development opportunities, (v) Enhancing your visibility

(7) **Networking in Academia**, Presenter: **Laura Malisheski**, PhD, Assistant Director, Graduate Student and Ph.D. Advising, Office of Career Services, Faculty of Arts and Sciences, Harvard University. May 9, 2012, Cannon Room, Building C.  
http://postdoc.hms.harvard.edu/events/featuredevents2012.html  
**Description:** Networking is not just for those outside the ivory tower. In fact, you may already be networking and not even know it! Shatter the schmoozing stereotype and join us to learn about the many ways networking can advance your academic career, your research, research productivity, and recognition in the field.

www.engr.psu.edu/ambassadors
Main Research Objectives

General aim is to develop a model animal system to study preventive and therapeutic interventions in states of compromised metabolism. Specific aims are (a) identification of serum and tissue markers that characterize the metabolic derangements associated with in utero metabolic stress; (b) examination of the effects of medicinal/hormonal and life-style interventions on these markers and their association with changes in insulin resistance, fuel partitioning, and metabolic balance.

Assistance of Marie Curie National Contact Points

Application
The NCP was very supportive during the application process. They welcomed my visits setting appointments in at least two occasions. The NCP was able to convey the basic philosophy of MC-IOF, suggest the appropriate path to identify critical information for the application process and its specific requirements, and provided relevant brochures and guidance for web access.

Negotiation
The NCP was also able to support me during the negotiation phase by providing information regarding the actual stage of the selection process and allowing a gross estimation of the time frame for the announcement of the final result. Indeed, the process of selection was delayed and no information was available on the MC-IOF site at the time. Considering that information is crucial for planning and in fact for making the final commitment on a number of important issues, prior to a possible inter-continental translocation, this information provided the necessary flexibility to plan in advance.

Implementation
So far, there have been no major implementation problems. However, several issues arise and are reason for temporary distress. I will communicate such issues to the NCP in order to help the planning for some preventive measures for future MC-IOF fellows. Overall, I consider the current role of NCP very positive and a solid ground for further development of this important service that may become a “guardian angel” for MC-IOF fellows.
The NCP was very supportive during the application process. They welcomed my visits setting appointments in at least two occasions.

The NCP was able to convey the basic philosophy of MC-IOF, suggest the appropriate path to identify critical information for the application process and its specific requirements, and provided relevant brochures and guidance for web access.
Negotiation

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So far, there have been no major implementation problems.

However, **several issues arise and are reason for temporary distress**. I will communicate such issues to the NCP, in order to help the planning for some preventive measures for future MC-IOF fellows.

Overall, I consider the current role of NCP very positive and a solid ground for further development of this important service that may become a **“guardian angel”** for MC-IOF fellows.